AGDFX

OPERATING MANUAL AND USER GUIDE

AG40DFX & AG80DFX

Albion
AMPLIFICATION

www.albionamps.com

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Important Safety Instructions

1. Read these instructions – All the safety and operating instructions should be read before this product is operated.

2. Keep these instructions – The safety and operating instructions should be retained for future reference.

3. Heed all warnings – All warnings on the appliance and in the operating instructions should be adhered to.

4. Follow all instructions – All operating and use instructions should be followed.

5. Do not use this apparatus near water – The appliance should not be used near water or moisture – for example, in a wet basement or near a swimming pool etc.

6. Clean only with dry cloth.

7. Do not block any ventilation openings. Install in accordance with the instructions.

8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. Do not defeat the safety purpose of the polarized or grounding plug. A polarized plug has two blades with one wider than the other. A grounding plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10. Protect the power cord from being walked on or pinched particularly at the plugs, convenience receptacles, and at the point where they exit from the apparatus.

11. Only use attachments/accessories specified by the manufacturer.

12. Use only with the cart, stand, tripod, bracket or table specified by the manufacturer, or sold with the apparatus. When a cart or rack is used, use caution when moving the cart/ apparatus combination to avoid injury from tip-over.

13. Unplug the apparatus during lightning storms or when unused for long periods of time.

14. Refer all servicing to qualified personnel. Servicing is required when the apparatus has been damaged in any way including: power supply cord or plug damage, liquid spillages, objects falling into the unit, exposure to rain/moisture or impact damage.

15. Please keep the unit in a well ventilated environment.

16. CAUTION: These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

17. WARNING: To reduce the risk of fire or electric shock do not expose this apparatus to rain, moisture and dripping or splashing of liquids. Containers filled with liquids such as vases or drinks should never be placed on top of or near the unit.

18. WARNING: The mains plug/appliance coupler is used as disconnect device, the disconnect device shall remain readily operable.

19. The lightning flash with arrowhead symbol is to alert the user to the presence of non-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

    - Warning: To reduce the risk of electric shock, do not remove cover (or back) as there are no user-serviceable parts inside. Refer servicing to qualified personnel.

- The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the appliance.

20. Protective earthing terminal. The apparatus should be connected to a mains socket outlet with a protective earthing connection.

21. Correct Disposal of this product. This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmentally safe recycling.

22. WARNING: The terminals marked with the symbol of " ⚠ " may be of sufficient magnitude to constitute a risk of electric shock. The external wiring connected to the terminals requires installation by an instructed person or the use of ready-made leads or cords according to manufacturer's instruction.

23. "Class 2 Wiring" for all other TERMINALS provided the audio output power exceeds 10W per channel under normal operating conditions or the apparatus is intended to be installed or interconnected in the field by a SKILLED PERSON.

Important Warnings

⚠ ALWAYS read the manual of your new amplifier – even if you are experienced with guitar amplifiers and their technology! There could be something important that you need to know.

⚠ ALWAYS check that your new amplifier is suited to the mains power supply in your country.

⚠ NEVER disconnect the earth (ground) connection from your amplifier. It is there to prevent you from receiving a fatal electric shock!

⚠ NEVER use your amplifier equipment in a high moisture environment (such as rain) or allow it to get wet.

⚠ ALWAYS use correct and well maintained cables for all inter-connections whether for power, speaker or signal connections. If in any doubt, get them checked or renew immediately.

⚠ NEVER use your amplifier products with any cooling vents covered, even partially. Your amp loves being fed nice cool air!

PARTICULARLY with valve (tube) amps allow your amp to warm up before playing, 5 minutes is a good length of time. Also allow your amp to have a good cool down after playing and before moving it, especially into the back of a car on a cold winter's night! Your valves will last longer if you give them a little respect and TLC. Valves are pretty tough when you think of what they are made from – but can be very fragile if treated with physical abuse.

⚠ ALWAYS use a cable rated for loudspeaker connection use for connecting your amplifier to your loudspeaker system. DO NOT use a screened guitar cable for speaker use.

⚠ NEVER use your amplifier without it connected to a suitable matched loudspeaker system.

WARNING! Sometimes parts of the outside of your amplifier may get hot to the touch. This is quite normal and will be within safe operational limits. These limits are set by various countries safety approvals committees, and we at Albion Musical Instruments design, build, test, and have approved our products to these international standards. I.e. CE, UL, CSA, CB, ETL etc.

EMC INTERFERENCE. Even though all Albion Musical Instruments products are designed and tested to international electro-magnetic interference standards, please note that cellular phones in close proximity may cause some interference with your amplifier.

⚠ ALWAYS have your amplifier serviced by a technician qualified in servicing musical instrument amplifier products. If in doubt please contact your dealer.

Designer's Introduction

Welcome to the *Albion* Musical Instruments AG40DFX and AG80DFX combo amps. The basic topology of these amps follow that of the other amps in the AG range – i.e. unique high-voltage FET and Valve based preamp circuitry and sweet sounding solid-state power amps. What these two amps have over their AG brothers is the in-built 16 program digital effects system giving these amps a whole new sonic dimension. I hope that you enjoy the sonic flexibility of your new *Albion* amp and get many years of playing from it.

Thank you

Outline Specification

The AG40DFX and the AG80DFX combo amps feature a very unique “hybrid” preamplifier section combining high voltage FETs (field effect transistors) and a 12AX7/ECC83 valve (or tube as is known in the USA). This special circuit is supplied with a high voltage DC supply, again pretty unique in small guitar amplifiers. This combination of circuit gives great valve tone, as it should because it is pretty much a valve circuit. The special high voltage FET that we use is the closest electronic device to an actual valve, but without some of the drawbacks of using an actual valve (cost, heat and high part count), and will give reliable performance without worry to you, but giving very much a valve like tone in its performance. The power amplifier circuits use a solid state power amp circuit that also has some “tweaks” that lead to a very convincing valve-like tone.

The AG40DFX uses a 12 inch loudspeaker designed to provide a very full and satisfying tone from its mono 40watt RMS power amp in a nicely proportioned compact cabinet. The AG80DFX uses two 12 inch speakers each fed from a 40watt RMS power amp running in stereo for a full 80 watts output. Again the cabinet design leads to an easily transportable package that doesn’t look or sound out of place at home, in the studio or on the stage.

The AG40DFX has a two channel control line-up of (normal channel) GAIN and VOLUME, and (overdrive channel) GAIN and VOLUME controls. The DRIVE switch (footswitchable) allows you to set up the preamp circuit for clean and overdrive functions. BASS, MIDDLE and TREBLE controls for tone shaping applications, and the DFX controls of SELECT and MIX for the in-built digital EFFECTS circuit (also footswitchable). The DFX system also has a LED display indicating the exact program selection.

The amp is also fitted with a 3.5mm Input Jack to be able to connect your MP3 or CD player (or any other auxiliary device such as a drum machine). This is a stereo socket, and uses a standard stereo 3.5mm lead, mixing the signal into mono mode suitable for the amplifier circuit, giving you the facility to play along to recorded tracks for practise purpose.

Another 3.5mm socket allows the use of standard stereo headphones for private use.

The output of the AG40DFX can also be plugged into another loudspeaker cabinet, bypassing the internal loudspeaker. Plugging into a bigger cabinet widens the tone available to something rather special.

The AG80DFX has a full two channel control line-up of consisting of NORMAL channel and OVERDRIVE channel giving you a very wide range of tones from Clean to Crunch to very serious Overdrive.

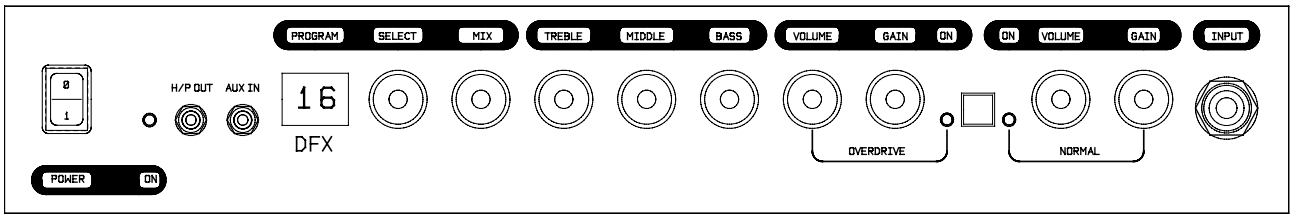
Each channel has a full complement of GAIN, VOLUME, TREBLE, MIDDLE and BASS controls. The two channels are footswitchable for full access to these sounds. This is complemented by the in-built digital reverb circuit (also footswitchable).

The amp is also fitted with a 3.5mm Input Jack to be able to connect your MP3 or CD player (or any other auxiliary device such as a drum machine). This is a stereo socket, and uses a standard stereo 3.5mm lead, mixing the signal into mono mode suitable for the amplifier circuit, giving you the facility to play along to recorded tracks for practise purpose.

Another 3.5mm socket allows the use of standard stereo Headphones for private use.

The speaker MUTE switch allows the headphone output socket to double as a speaker emulated DI output with or without the full loudspeaker sound.

AG40DFX Features and Controls



INPUT – Mono ¼" Jack socket for instrument input. Use a properly screened "guitar" cable for interconnection. There are many different makes of guitar cable available, ranging from fairly inexpensive to very expensive. Each have different characteristics, and depending on your particular guitar will give different results, all very confusing for the inexperienced! For instance, a "cheap" cable with high capacitance (which would normally be termed as a "not very good cable") can actually be of benefit for an overly bright single coil guitar by taming the very high end frequencies. Alternatively, a very low capacitance cable can help brighten up a muddy sounding hum-bucker type guitar. If possible experiment to try and find what suits you and your guitar best. Hopefully your dealer can help you choose the right cable. If using an FX pedal system then the best advice is to use a high quality, low noise, and low capacitance cable from pedal to amp.

GAIN (normal) – This controls the level of the Normal channel. At lower settings the sound will be clean and will have a bit of treble lift that will compensate the sound to enable your ear to hear a good spectrum of tone without it sounding flat. At higher control settings the sound will thicken up and get louder. As it reaches maximum volume the sound will "crunch" up as the amplifier circuit will start to be overdriven. A word of note! Different types of guitars and pick-ups have very different tonal characters and the voltage level from the pick-ups can vary by quite a large amount, thus the control positioning will vary depending on your guitar and what sound you want. As a rule of thumb Single-coil type guitars have less output and a brighter sound. Guitars with Hum-buckers will have a thicker louder sound. Also pick-up height has a great influence on tone and volume. Further away from the strings will be cleaner and quieter, closer to the strings will be fatter and louder.

VOLUME (normal) – This quite simply controls the output of the sound generated by the normal preamp, giving you the required sound level and balance that you require.

DRIVE SWITCH & LED INDICATOR – The DRIVE pushswitch changes the amplifier channel from Normal (A) to Overdrive (B). When Overdrive is selected the LED next to the switch is illuminated and the Overdrive channel GAIN and VOLUME controls become effective. The 2-way footswitch (AMI FS2) can be connected to remotely change channels and mute the amp's reverb section. Please remember that to use the footswitch then the A-B Drive switch MUST be pushed in.

GAIN (overdrive) – This control determines the amount of signal that the preamp circuit has to produce the overdrive sound. Low settings will produce an almost clean slightly crunchy tone, whilst higher to maximum settings will produce intense overdriven distortion tones.

VOLUME (overdrive) – This quite simply controls the output of the sound generated by the overdrive preamp, giving you the required sound level and balance that you require.

TREBLE, MIDDLE, BASS EQ – The EQ circuit works on both the Normal and Overdrive channels. The AG40DFX EQ system is of the time-honoured passive guitar amp system as used by virtually all guitar amps even the very greatest pro amps, but with an added bass boost circuit that gives the AG range of amps added warmth especially at low volumes. This type of tone shaping is very wide ranging and very versatile, although please remember it is also very interactive so that each control also has an influence on the other controls. Experimentation is the key – please start with these controls set to mid position.

DFX MIX – This controls the amount of DFX signal from the on-board digital reverb circuit that is mixed with the direct preamp signal. This is footswitchable on or off when using the above mentioned footswitch.

DFX SELECT – This rotary encoder selects which one

of the 16 programs of digital effects that you want to use. Each program illuminates the associated number on the LED display, giving you instant program recognition. See list below for available programs.

AUX IN – This socket accepts the stereo output of a MP3/CD player, or any other auxiliary input device such as a rhythm drum machine. Please use a standard 3.5mm Stereo screened inter-connect cable.

HP OUT – This 3.5mm socket is the output to feed into headphones for silent practise. Any standard 16 ohm stereo headphones can be used, although as with all things, the better the headphone the better the sound.

POWER SWITCH AND INDICATOR – The power switch and its associated "ON" indicator controls the mains electricity supply into your amplifier. It is "best practise" to turn your amplifier OFF when not using it, if for no better reason than not using the power and helping to protect the environment! The markings of "0" and "1" comply with international standards – 0=off, 1=on.

Rear Panel

SWITCH – Connect the AMI FS2 footswitch into this socket.

LOUDSPEAKER OUTPUT – The output jack socket mounted on the rear panel of the AG40DFX allows the amplifier to be connected into an external loudspeaker unit. When doing this the internal 12 inch loudspeaker is disconnected. The amplifier will feed into a load of between 8 ohms and 16 ohms only

DO NOT USE ANY OTHER LOAD IMPEDANCE!

Great sounds can be achieved using other guitar speaker cabinets, especially running into a 4x12" cabinet. Using a good speaker system brings out the very impressive sound capabilities of the AG40, making it into an even more impressive amp.

MAINS INPUT – The mains input receptacle allows for the connection of the mains power cord, and also houses the mains power fuse. To comply with International Safety Regulations (for your safety and protection) your amplifier is supplied to work with the mains supply in your country. Please check the white rating label fitted to the back panel. If in any doubt, please check with your supplier. It is of utmost importance to use the correct earthed and rated power cord, as is supplied with your amplifier.

WARNING! DO NOT USE WITHOUT CONNECTING THE EARTH (GROUND) WIRE.

In the case of the mains fuse blowing, this can be changed by removing the power cord connector from the amplifier receptacle and with the aid of a small screwdriver the small drawer in the receptacle can be withdrawn allowing access to the mains power Fuse.

WARNING! USE THE CORRECT REPLACEMENT VALUE ONLY!

A WORD OF ADVICE About fuses – if a fuse blows it is usually for a very good reason, it could be anything from a voltage spike on the mains power, to a serious malfunction of your amplifier. Fuses are there for your protection – treat them with respect, and never replace with the wrong value!

Specification

40 watts RMS output into internal 12 inch 8 ohm impedance loudspeaker. The amplifier will also feed an external speaker cabinet of 8 to 16 ohms impedance with a power rating of at least 40 watts RMS.

WARNING! DO NOT USE ANY OTHER SPEAKER LOAD IMPEDANCE.

1 off 12AX7/ECC83 double triode small signal valve (tube)

Mains Fuse = 100V 50/60 Hz supply = T1.25A (time lag) 250V rated 20mm glass fuse
Mains Fuse = 120V 60 Hz supply = T1.25A (time lag) 250V rated 20mm glass fuse
Mains Fuse = 230V 50 Hz supply = T630mA (time lag) 250V rated 20mm glass fuse
Mains Fuse = 240V 50/60 Hz supply = T630mA (time lag) 250V rated 20mm glass fuse

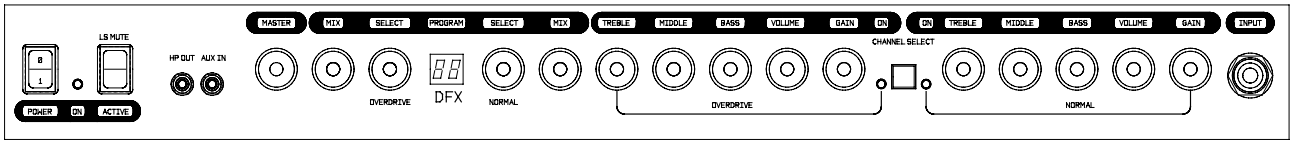
Sizes – ***AG40DFX*** 1x12" combo Dimension = 491mm (W) x 447mm (H) x 286mm (D) – Weight = 13Kg

CAUTION!

There are no user serviceable parts mounted inside your amplifier! Refer servicing to suitably qualified personnel.

This means that for your own safety and the correct performance of your amplifier, do not open the chassis unless you really do know what you are doing!

AG80DFX Features and Controls



INPUT – Mono ¼" Jack socket for instrument input. Use a properly screened "guitar" cable for interconnection. There are many different makes of guitar cable available, ranging from fairly inexpensive to very expensive. Each have different characteristics, and depending on your particular guitar will give different results, all very confusing for the inexperienced! For instance, a "cheap" cable with high capacitance (which would normally be termed as a "not very good cable") can actually be of benefit for an overly bright single coil guitar by taming the very high end frequencies. Alternatively, a very low capacitance cable can help brighten up a muddy sounding hum-bucker type guitar. If possible experiment to try and find what suits you and your guitar best. Hopefully your dealer can help you choose the right cable. If using an FX pedal system then the best advice is to use a high quality, low noise, and low capacitance cable from pedal to amp.

A-B SWITCH & LED INDICATORS – The A-B pushswitch changes the amplifier channel from Normal (A) to Overdrive (B). When NORMAL is selected the LED next to the switch is illuminated and the Normal channel controls become effective. When Overdrive is selected the LED next to the switch is illuminated and the Overdrive channel controls become effective. The 2-way footswitch (AMI FS2) can be connected to remotely change channels and mute the amp's reverb section. Please remember that to use the footswitch then the A-B Drive switch MUST be pushed in.

The differences between the Normal and Overdrive channels are worth understanding. The Normal channel is designed to give predominantly great clean to slightly overdriven crunch sounds. To achieve this the EQ circuit is placed before the channels gain circuits, thus the EQ sort of works like 3 frequency dependant gain controls. When the Normal gain control is set close to, or at, maximum then the post EQ gain circuits get overdriven and can be fine tuned with the EQ – try turning up the MIDDLE control for a very "singing" tone.

The Overdrive channel works slightly differently. For a start the circuit is designed for much more distortion and overdrive, and is voiced to focus in on the best frequencies that overdrive works at. Alternatively to the Normal channel, the EQ on the Overdrive channel is placed after the gain and distortion circuitry – thus the EQ tailors the tone of the distortion.

GAIN – This control determines the amount of signal that the preamp circuit has to produce the overdrive sound. Low settings will produce clean tones; whilst higher to maximum settings will produce overdriven tones. The intensity and voice of these will change from normal to overdrive channels.

VOLUME – This quite simply controls the output of the sound generated by the preamp, giving you the required sound level and balance that you require.

TREBLE, MIDDLE, BASS EQ – The EQ circuit works on both the Normal and Overdrive channels. The AG80DFX EQ system is of the time-honoured passive guitar amp system as used by virtually all guitar amps even the very greatest pro amps, but with an added bass boost circuit that gives the AG range of amps added warmth especially at low volumes. This type of tone shaping is very wide ranging and very versatile, although please remember it is also very interactive so that each control also has an influence on the other controls. Experimentation is the key – please start with these controls set to mid position.

DFX MIX – This controls the amount of DFX signal from the on-board digital reverb circuit that is mixed with the direct preamp signal. This is footswitchable on or off when using the above mentioned footswitch.

DFX SELECT – This rotary encoder selects which one of the 16 programs of digital effects that you want to use. Each program illuminates the associated number on the LED display, giving you instant program recognition. See list below for available programs.

With this amplifier you can assign any of the 16 programs to each of the two channels and also the mixing of the dry/effect signals, i.e. chorus on “normal” and delay on “overdrive” etc. Another thing to remember is that the DFX system outputs the signals in stereo which when fed into the twin power amps and speakers gives a very wonderful studio quality to the sound of the AG80DFX amplifier.

AUX IN – This socket accepts the stereo output of a MP3/CD player, or any other auxiliary input device such as a rhythm drum machine. Please use a standard 3.5mm Stereo screened interconnect cable.

HP OUT – This 3.5mm socket is the output to feed into headphones for silent practise. Any standard 16 ohm stereo headphones can be used, although as with all things, the better the headphone the better the sound. On the AG80DFX the headphone output is fed from an intricate active speaker emulating filter network to produce a more accurate “guitar speaker” sound through headphones. This circuit is placed before the power amplifier section, and therefore can ALSO be used as an emulated DI Line Out for connecting into a PA or Recording system.

LS MUTE/ACTIVE SWITCH – This switch mutes the input of the AG80DFX power amplifier. This has two purposes A) it can be used as a Standby switch to mute your stage signal without turning off the amplifier during breaks at gigs, etc – B) when using the Headphone out socket for headphone only, or for silent DI output, switching to Mute gives you silent performance.

POWER SWITCH AND INDICATOR – The power switch and its associated “ON” indicator controls the mains electricity supply into your amplifier. It is “best practise” to turn your amplifier OFF when not using it, if for no better reason than not using the power and helping to protect the environment! The markings of “0” and “1” comply with international standards – 0=off, 1=on.

Rear Panel

FX LOOP SEND & RETURN – A nominally -10dB series effects loop. Send connects to the input of your effects system. Return connects to the output of your effects system. Generally it is quite unwise to use “stomp box” type pedals in an effect loop, they are not designed for such use, and are best suited to be connected between guitar and the amplifier input. FX loops are best suited for delay, modulation and EQ processors. Use good quality screened cables!

SWITCH – Connect the AMI FS2 footswitch into this socket.

MAINS INPUT – The mains input receptacle allows for the connection of the mains power cord, and also houses the mains power fuse. To comply with International Safety Regulations (for your safety and protection) your amplifier is supplied to work with the mains supply in your country. Please check the white rating label fitted to the back panel. If in any doubt, please check with your supplier. It is of utmost importance to use the correct earthed and rated power cord, as is supplied with your amplifier.

WARNING! DO NOT USE WITHOUT CONNECTING THE EARTH (GROUND) WIRE.

In the case of the mains fuse blowing, this can be changed by removing the power cord connector from the amplifier receptacle and with the aid of a small screwdriver the small drawer in the receptacle can be withdrawn allowing access to the mains power Fuse.

WARNING! USE THE CORRECT REPLACEMENT VALUE ONLY!

A WORD OF ADVICE about fuses – if a fuse blows it is usually for a very good reason, it could be anything from a voltage spike on the mains power, to a serious malfunction of your amplifier. Fuses are there for your protection – treat them with respect, and never replace with the wrong value.

Specification

80 watts RMS (2 x 40W) output into internal 2 x 12 inch 8 ohm impedance loudspeakers.

WARNING! DO NOT USE ANY OTHER SPEAKER LOAD IMPEDANCE.

1 off 12AX7/ECC83 double triode small signal valve (tube)

Mains Fuse = 100V 50/60 Hz supply = T3.15A (time lag) 250V rated 20mm glass fuse
Mains Fuse = 120V 60 Hz supply = T3.15A (time lag) 250V rated 20mm glass fuse
Mains Fuse = 230V 50 Hz supply = T1.6A (time lag) 250V rated 20mm glass fuse
Mains Fuse = 240V 50/60 Hz supply = T1.6A (time lag) 250V rated 20mm glass fuse

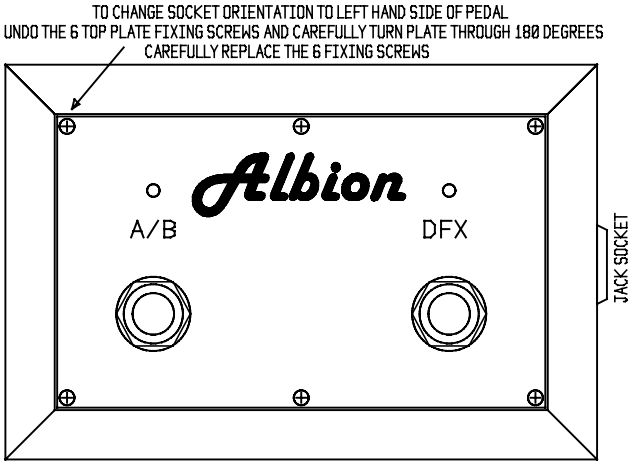
Sizes – ***AG80DFX*** 2 x12” combo Dimension = 699 (W) x 447 (H) x 286 (D) – Weight = 19Kg

CAUTION!

There are no user serviceable parts mounted inside your amplifier! Refer servicing to suitably qualified personnel.

This means that for your own safety and the correct performance of your amplifier, do not open the chassis unless you really do know what you are doing!

AMI FS2 FOOT-PEDAL – The 2-way foot-pedal supplied with your ***AG40DFX*** or ***AG80DFX*** amplifier has a couple of features that you may want to be made aware of. Firstly the supplied stereo jack cable can be replaced if required by any ¼" Stereo Jack lead – either screened or unscreened. Secondly, to help the foot-pedal fit better in with your normal stage set-up, the cable connection can be made Right Hand (as supplied) or can be converted to Left Hand connection. Please see the diagram below:


TO CHANGE SOCKET ORIENTATION TO LEFT HAND SIDE OF PEDAL
UNDO THE 6 TOP PLATE FIXING SCREWS AND CAREFULLY TURN PLATE THROUGH 180 DEGREES
CAREFULLY REPLACE THE 6 FIXING SCREWS
Albion
A/B
DFX
JACK SOCKET

DIGITAL EFFECTS SYSTEM PROGRAM LIST

1 - SLAP DELAY
2 - DIGITAL DELAY
3 - AMBIENCE
4 - EARLY REFLECT
5 - CHORUS
6 - ECHO
7 - FLANGE
8 - PHASER
9 - SPRING REVERB
10 – ROOM REVERB 2
11 - GATED REVERB
12 - REVERSE REVERB
13 - CHAMBER REVERB
14 – ROOM REVERB 1
15 - BIG HALL
16 - SMALL HALL

IAG House, Sovereign Court, Ermine Business Park, Huntingdon, Cambs, PE29 6XU, England
www.albionamps.com
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